

US EPA ARCHIVE DOCUMENT



## EPR for Packaging Ontario Case Study

USEPA Dialogue on Sustainable Financing of  
Municipal Recycling  
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# STEWARDEDGE

## Ontario - Key Statistics

- 12.7M population
- 4.4M households
- 500 municipalities
  - organized into 120 regional recycling programs
- 95% of single family homes with recycling services
- ~25% of multi-family units served
- Some significant differences in packaging generation
  - i.e., beverage containers ~ 50% of US rates



# STEWARDEDGE

## Ontario's Blue Box Program Plan (BBPP)

- Brand Owners & first importers are “stewards”
- Stewards fund 50% approved net cost of municipal residential Blue Box (BB) programs
  - shared responsibility approach
- Small business exemptions:
  - less than \$2M sales
  - less than 15,000 kg of designated materials
- Stewards report on/pay for amount & type of printed paper & packaging they generate





# STEWARDEGE

## What are Blue Box Wastes (BBW)?

- Defined by regulation (ON Reg. 273/02)
  - glass, metal, paper, plastic & textiles or any combination of above
- BBPP narrowed definition to only consumer packaging material & printed papers commonly found in residential waste stream
  - includes all household packaging & printed paper managed as municipal waste



## BBPP Obligated Categories

Category	Material	Category	Material
<b>Printed Paper</b>	Newsprint: CNA & OCNA Newsprint: Non-CNA/OCNA Magazines & Catalogues Telephone Books Other Printed Paper	<b>Plastics</b>	PET bottles HDPE bottles Plastic film Plastic laminants Polystyrene Other plastics
<b>Paper Packaging</b>	Old Corrugated Containers Gabletop Paper Laminants Aseptic Containers Old Boxboard	<b>Aluminum (Al)</b>	Al food & beverage containers Other aluminum packaging
<b>Steel</b>	Steel food & beverage containers Aerosols Paint cans	<b>Glass</b>	Food & beverage – Flint & coloured

## Steward Requirements

- All stewards report online
- BBPP
  - annual report based on previous year sales
  - total quantity (kg) sold or delivered into ON in 22 material categories
  - quarterly payments

## Stewards Register, Report & Invoice Online

2008 Results	
Registration with Stewardship Ontario	4,235
Exempted - No Blue Box wastes	1,290
Exempted - Blue Box wastes but <\$2 Million	992
Obligated Stewards – required to submit Steward's Report	1,951
Reported between 0 to 15 tonnes – no fees paid	407



## BB Fee-Setting

- Key elements include:
  - weight-based fees promote reduction
  - activity-based costing to assign differential costs to each material type
  - 3-factor formula shifts costs from highest performing materials to lowest performing
  - market development fees to overcome market barriers, enhance value
  - shares common costs across all materials

## Market Development Fees

- Where required to increase capacity/increase revenues
- Included in steward fees, by material type
- Glass market development successes
  - ~ \$2.5M added to glass fees
  - funding for 7 projects to use mixed glass
- Plastics market development underway
- Plastics ~ \$2.4M
  - focus on developing markets & “All bottles plus tubs” promotion & education campaign

## Current Funding Formula

- Encourages diversion of greater quantities of Blue Box Wastes
  - at lowest possible cost to stewards & municipalities
  - encourages recovery of next least cost tonne BBW
  - shares some costs incurred by stewards of materials with highest recycling rates among stewards of materials with lowest recycling rates

## Ontario Blue Box Recycling Performance

- Population in ON – 12.7M people
  - approx. 39% of Canadian population

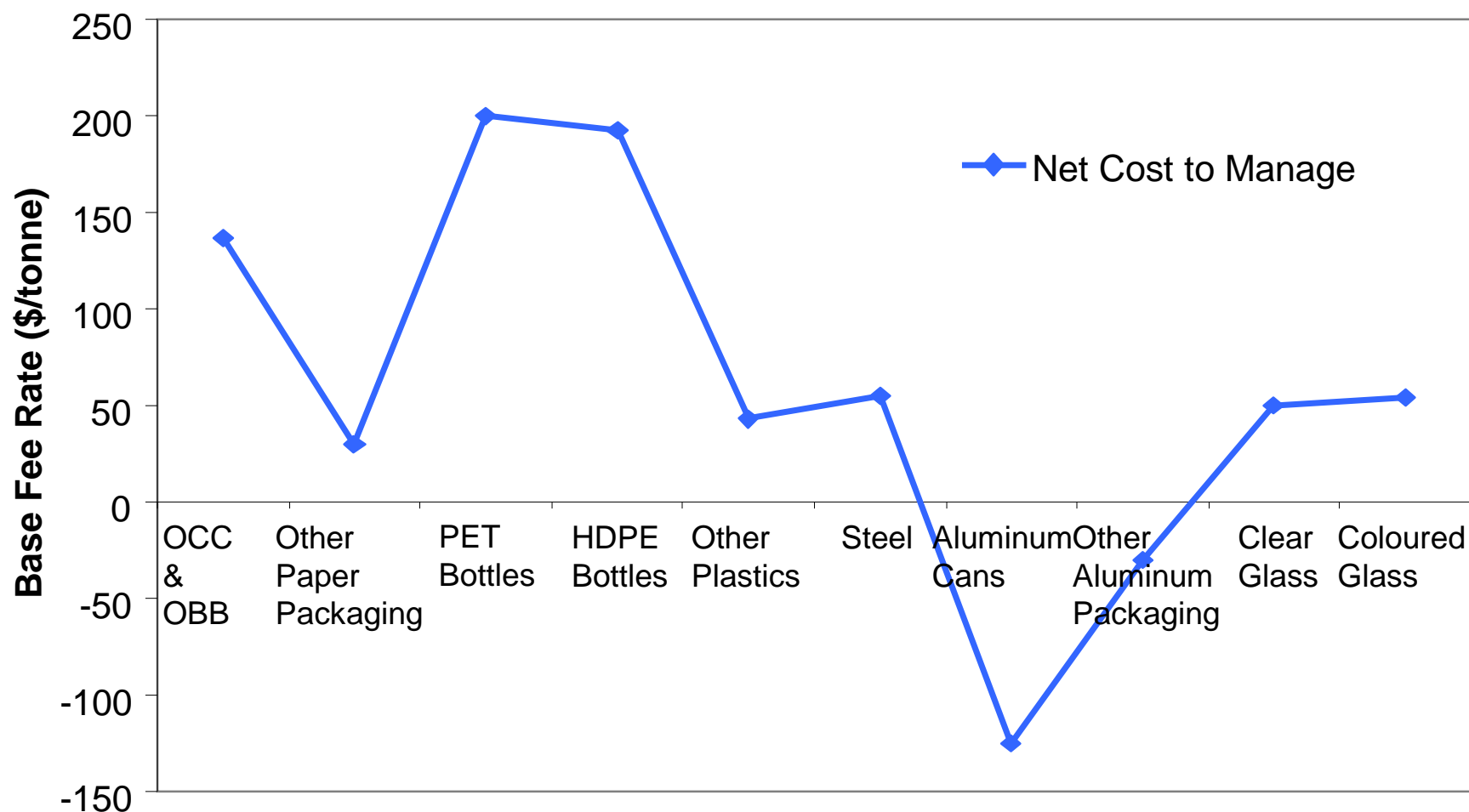
Category	Generation (lb per capita)	Recovery (lb per capita)	Recovery Rate (%)
Printed Paper	109.1	86.7	79%
Paper Packaging	60.3	35.1	58%
Plastics	41.5	9.2	22%
Steel	10.3	5.8	56%
Aluminum	4.6	1.8	39%
Glass	13.9	11.5	83%
<b>Total</b>	<b>239.7</b>	<b>150.1</b>	<b>63%</b>



## How Fees Set to Share Costs

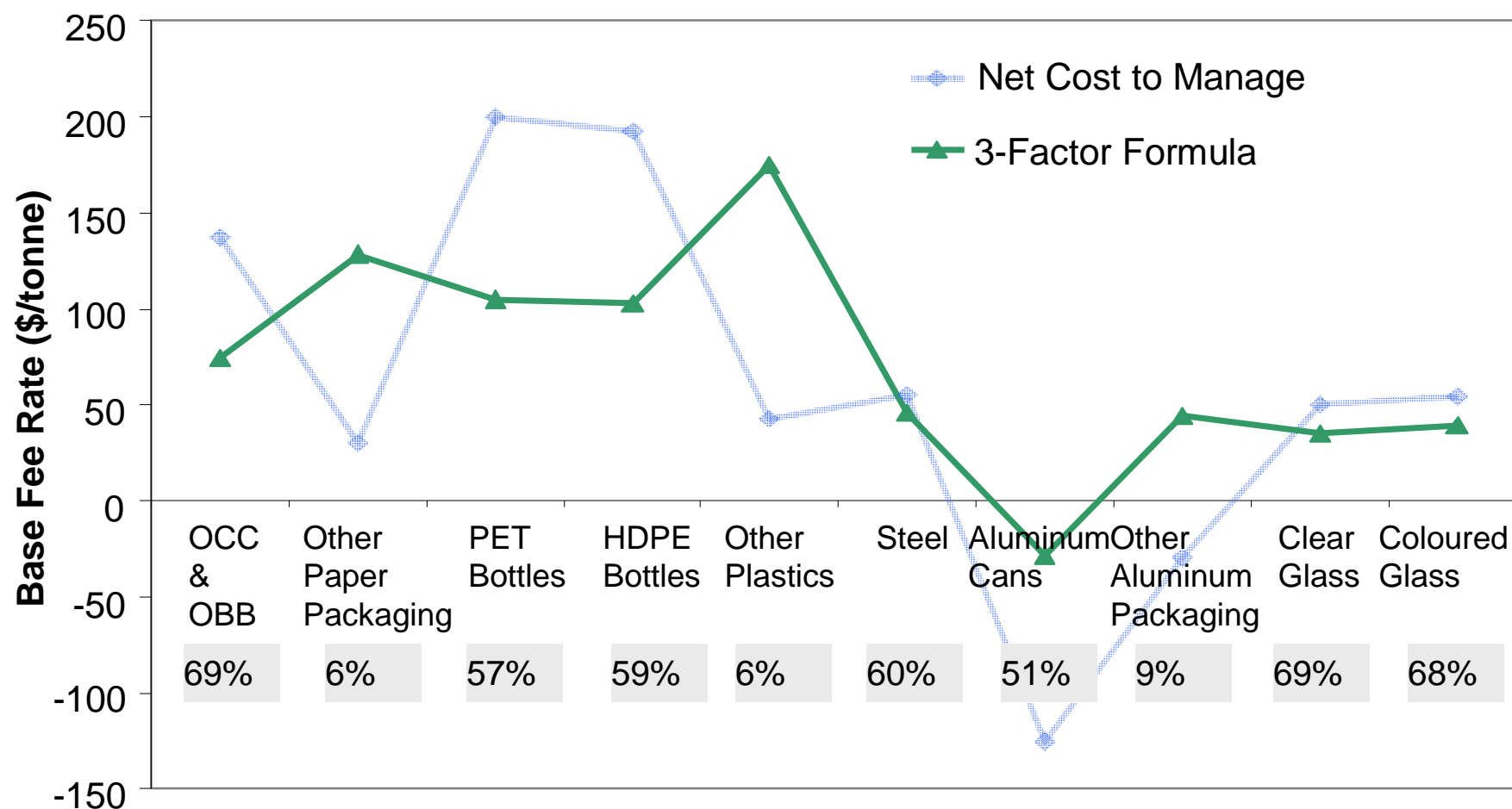
- Total costs divided by materials according to approved methodology
- 3-factor formula:
  - 35%: relative recovery rate—higher recovery, lower fee rate
  - 40%: net cost to manage (activity-based)
  - 25%: to recognize materials at high recovery & low net cost (equalization factor)

## Fees Reflecting 100% Cost



Allocate cost to collect & sort each material using detailed activity-based costing

## Impact of Fee-Setting Formula



3 factor formula transfers costs from materials with high recycling rates to those with low recycling rates to increase financial incentive to improve performance

## Examples of Policy Impact on BBPP Fees

	Recovery Rate	50% Net Cost Obligation	Base Fees	Costs Transferred
Corrugated Cardboard & Boxboard	69%	\$35M	\$19M	(\$16M)
Other Plastics	6%	\$6M	\$24M	+\$18M

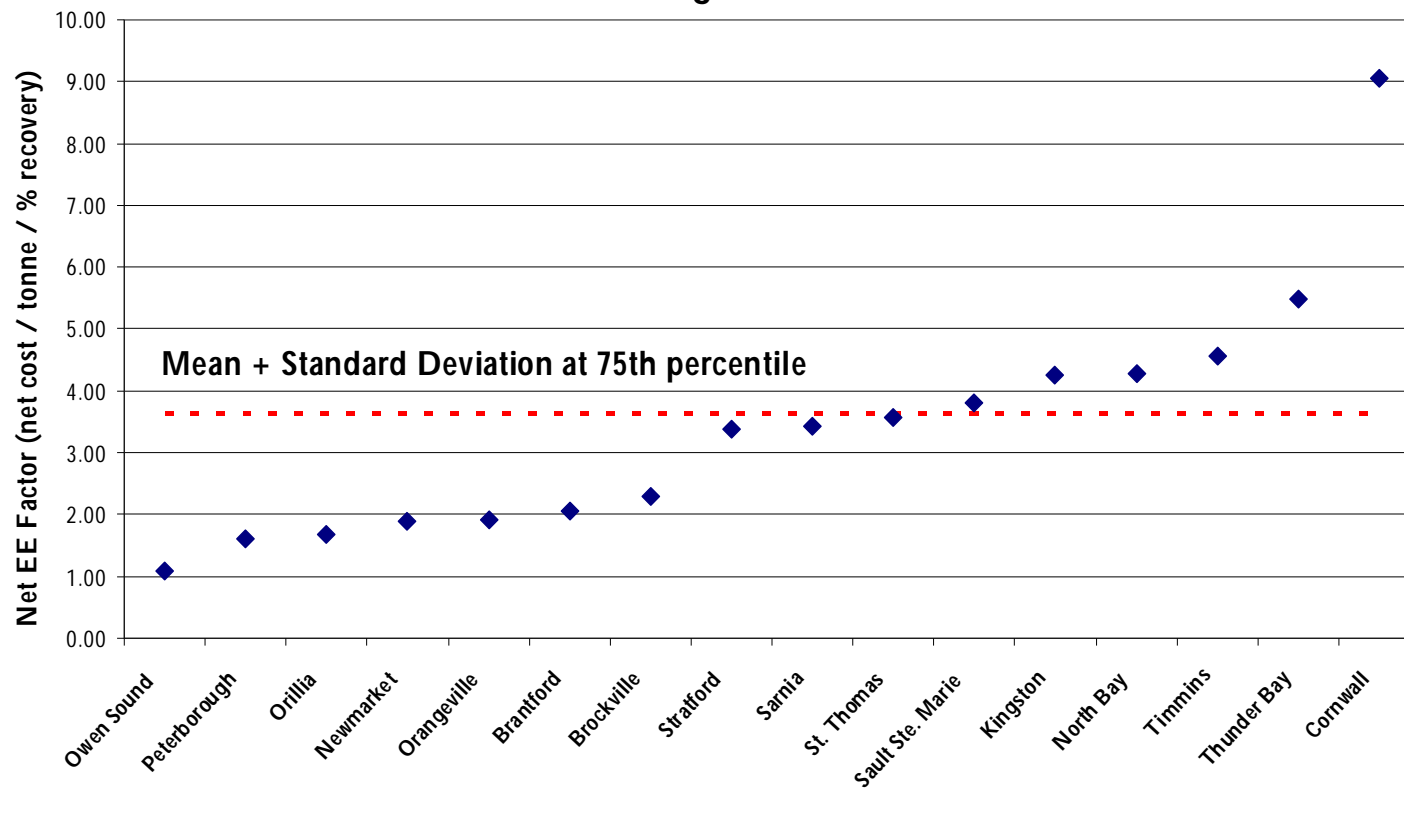
[www.stewardshipontario.ca/bluebox/fees/fees\\_2008.htm](http://www.stewardshipontario.ca/bluebox/fees/fees_2008.htm)



## Monitoring & Tracking

### *Establishing & tracking key performance indicators*

Profile of Net E&E Factors for Small Urban Municipal Blue Box Programs



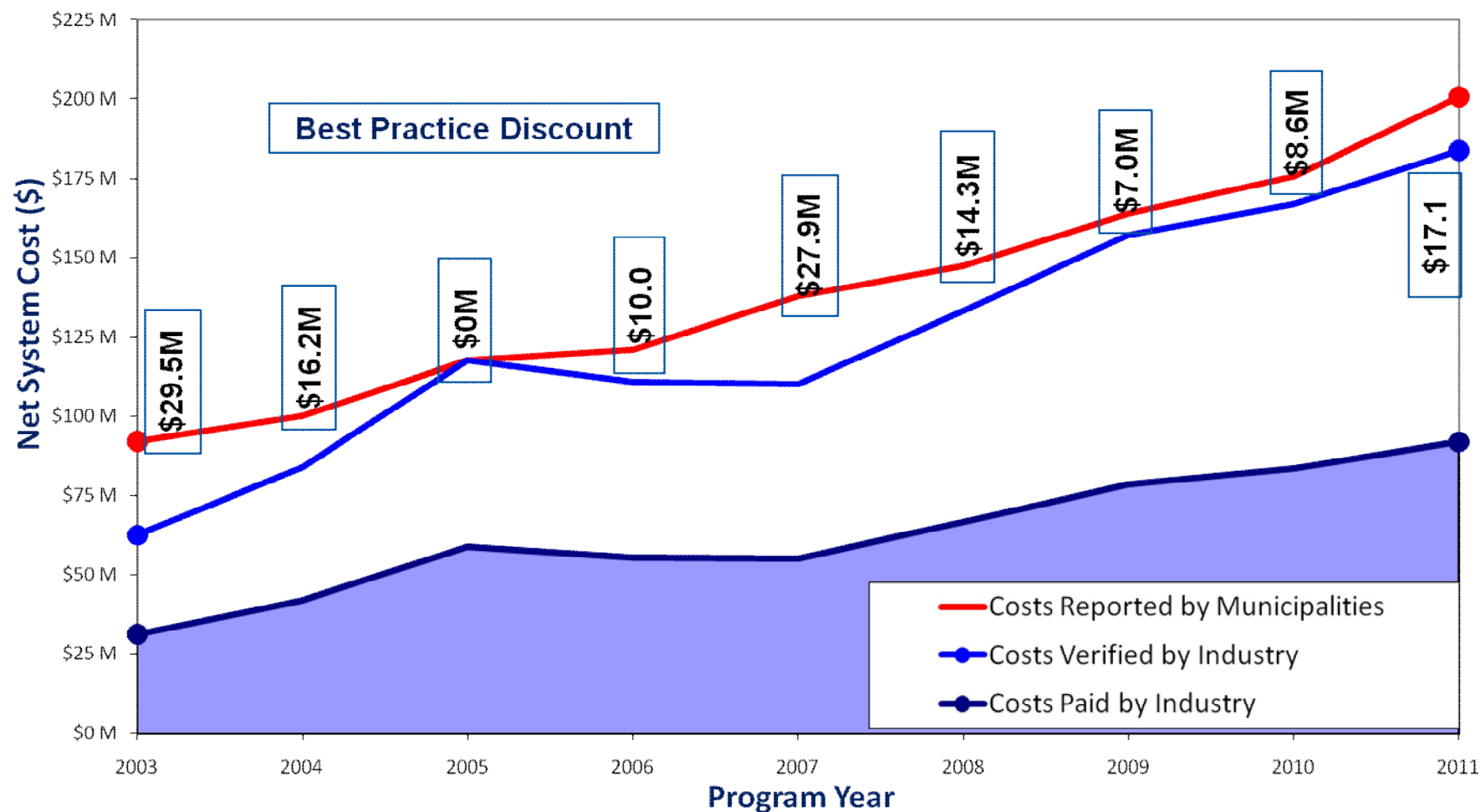
## Continuous Improvement Fund

- 80% of annual stewards obligation is paid out to individual municipalities in quarterly payments
- Through 2010, 20% of the annual stewards cash contribution is allocated to the CIF and distributed on a competitive grant basis
- Objectives is to assist Ontario municipalities to improve the effectiveness and efficiencies of the blue box program and to divert more paper and packaging material from landfill

## Key Performance Metrics

- CIF has received over 340 applications and invested \$24.5 million in 242 projects.
  - Includes all aspects of the blue box program from collection to processing, promotion and education, and end market reprocessing
- Funds have been distributed across the province to over 150 municipalities and First Nation communities.
- Over 100,000 tonnes of new material processing capacity has been added to the system with projected payback in operational savings of four years

## Program Cost Trend





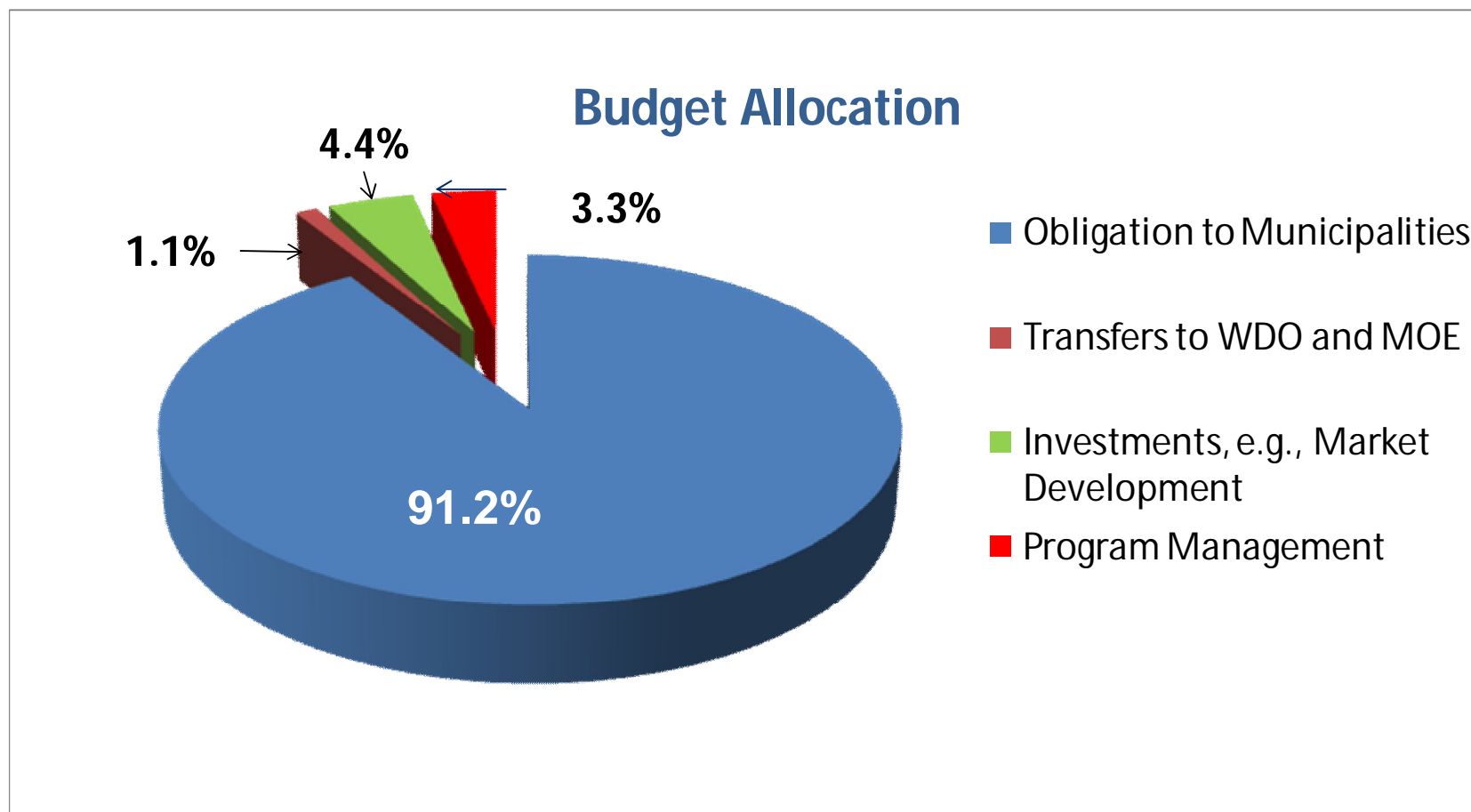
## How Much Does This Cost?

## Multi-Material Costs in Ontario

- Steward obligation adjusted based on “best practice” analysis
- \$157 M CAD approved net system cost (gross cost less revenue) for 2009 fee's
  - industry obligation: \$78.5M CAD (50% of net cost)
    - printed paper worth 13% of obligation
    - packaging worth 87% of obligation

Category	Net Cost (CAD \$/ton)	% of Net Cost
Printed Paper	\$19	13%
Paper Packaging	\$182	52%
Plastics	\$397	30%
Steel	\$76	4%
Aluminum	(\$401)	(6%)
Glass	\$83	8%
<b>Total</b>	<b>\$82</b>	<b>100%</b>

## Where the Money Goes



## System Cost Changes/Trends

	2008	2009	% Change
<b>Gross Cost</b>	\$312.60t	\$330.40/t	+5.7%
<b>Material Revenue</b>	\$132.95/t	\$119.32/t	-10.3%
<b>Net Cost</b>	\$179.65/t	\$211.08/t	+17.5%

- Steel price down 64%, aluminum down 36%
- Plastic prices down 54%
- Newspaper price down 41%, corrugated cardboard down 39%, boxboard down 58%



## Unusual Market Conditions (1)

- 2008/9 recession created “perfect storm” of negative drivers for steward fees:
  - commodity prices down across the board
  - lower product sales, fewer tonnes to recycle, fewer tonnes against which to allocate costs
  - fuel costs, changing material mix & largely fixed costs offset any reduction from fewer tonnes
  - newsprint generation continues to decline

## Unusual Market Conditions (2)

- 2003-2008 material generation was steadily increasing due to growing economy
- Generation dropped in 2009 due to recession & impact of steward efforts to reduce product packaging
- Clear but weak economic recovery suggests higher sales for some materials in 2010 versus 2009
- Examined economic conditions on material basis & adjusted forecasted sales to reflect findings

## Example Fee Rates – Ontario (1)

Obligated Materials	Fees with 50/50 Cost Share (cents/kg)	Fees with 100% Responsibility (cents/kg)
Old Corrugated Containers	7.81	15.62
Gable top	19.65	39.30
Paper Laminants	19.65	39.30
Aseptic Containers	19.65	39.30
Old Boxboard	7.81	15.62
PET bottles	12.98	25.96
HDPE bottles	12.49	24.98
Plastic Film	24.65	49.30
Plastic Laminants	24.65	49.30
Polystyrene	24.65	49.30
Other Plastics	24.65	49.30

## Example Fee Rates – Ontario (2)

Obligated Materials	Fees with 50/50 Cost Share (cents/kg)	Fees with 100% Responsibility (cents/kg)
Steel Food & Beverage	5.54	11.08
Steel Aerosols	5.54	11.08
Steel Paint Cans	5.54	11.08
Al Food & Beverage Cans	-2.20	-4.40
Other Aluminum Packaging	1.39	2.78
Flint Glass	3.80	7.60
Coloured Glass	4.10	8.20



**Thank you!**

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